

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

DUNAGAN et al.

Group Art Unit: Unassigned

Application No. Unassigned

Examiner: Unassigned

Filed: October 17, 2003

For: SCALABLE, FAULT-TOLERANT EVENT  
NOTIFICATION METHOD

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Non-Fee Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Pursuant to 37 CFR 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 and/or Substitute Form PTO-1449 ("Form 1449") are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner place his or her initials in the appropriate area on the enclosed Form 1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form 1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

The Information Disclosure Statement is being filed:

- ☒ **within** any one of the following time periods: (a) within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d); (b) within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 of an international application; (c) before the mailing date of a first Office Action on the merits; or (d) before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.
- ☐ **after** (a), (b), (c) or (d) above, but before the mailing date of a final action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and includes *one* of:
- ☐ the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below).
- or*
- ☐ the fee of \$180 set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a final action under 37 CFR 1.113 or a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and on or before payment of the issue fee, and includes the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a Notice of Allowance under 37 CFR 1.311, and on or before payment of the issue fee, and **within** thirty days of receiving each item of information contained in the Information Disclosure Statement, and includes the Statement under 37 CFR 1.704(d) (see "Statement under 37 CFR 1.704(d)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).

NOTE: This is for original applications except applications for a design patent, filed on or after May 29, 2000, wherein a paper containing only an Information Disclosure Statement in compliance with 37 CFR 1.97 and 1.98 is being filed.

### Copies of the References

- ☒ Copies of the references listed on the enclosed Form 1449 are enclosed herewith. Attached to each reference not in the English language is a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3). An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3).
- ☐ A copy of the foreign search report is enclosed herewith.

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- ☐ The references listed on the enclosed Form 1449 were previously identified in the parent application(s) of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 CFR 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 USC 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		Status ( <i>check one</i> )		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1.				
2.				
3.				

**Statement under 37 CFR 1.97(e)**

- ☒ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby states that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

**Statement under 37 CFR 1.704(d)**

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

**Fees**

- ☒ No fee is owed by the applicant(s).  
☐ The **IDS Fee of \$180** under 37 CFR 1.17(p) is enclosed herewith.

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**Method of Payment of Fees**

- ☐ Attached is a check in the amount of \$ .  
☐ Charge Deposit Account No. 12-1216 in the amount of \$ . (A duplicate copy of this communication is enclosed for that purpose.)

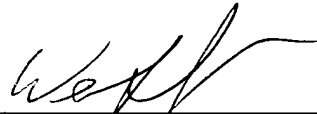
**Authorization to Charge Additional Fees**

- ☒ If any additional fees are owed in connection with this communication, please charge Deposit Account No. 12-1216. (A duplicate copy of this communication is enclosed for that purpose.)

**Instructions as to Overpayment**

- ☒ Credit Account No. 12-1216.  
☐ Refund

Respectfully submitted,



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AWF:kas

Please type a plus sign (+) inside this box →



Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>		
				Application Number	Unassigned	
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				First Named Inventor	DUNAGAN et al.	
				Group Art Unit	Unassigned	
Examiner Name	Unassigned					
Attorney Docket Number	223569/MICROSOFT					
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U.S. PATENT DOCUMENTS						
Examiner Initials	Doc. No.	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Filing Date If Appropriate
		Application or Patent Number	Kind Code			
	P 1	10/356,961		HARVEY et al.		02/03/2003
	P 2	10/177,335		THEIMER et al.		06/21/2002
	P 3	10/107,287		THEIMER et al.		03/27/2002

OTHER - NON PATENT LITERATURE DOCUMENTS					Translation	
Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.			Yes	No* +
	A 1	D. G. Andersen, H. Balakrishnan, M. F. Kaashoek, and R. Morris, "Resilient overlay networks," <i>18<sup>th</sup> ACM Symposium on Operating Systems Principles</i> , Oct. 2001.				
	A 2	K. P. Birman and T. A. Joseph, "Exploiting virtual synchrony in distributed systems," <i>Proceedings of the 11<sup>th</sup> Symposium on Operating Systems Principles</i> , pages 123-138, Nov. 1987.				
	A 3	A. Carzaniga, D. S. Rosenblum, and A. L. Wolf, "Design and Evaluation of a Wide-Area Event Notification Service," <i>ACM Transactions on Computer Systems (TOCS)</i> , 19(3):332-383, Aug. 2001.				
	A 4	M. Castro, P. Druschel, A. Ganesh, A. Rowstron, and D. Wallach, "Secure Routing for Structure Peer-to-Peer Overlay Networks," <i>Proceedings of the Fifth OSDI</i> , Dec. 2002.				
	A 5	M. Castro, P. Druschel, A.-M. Kermarrec, A. Nandi, A. Rowstron, and A. Singh. "SplitStream: High-bandwidth content distribution in cooperative environments," <i>Proceedings of Second International Workshop on Peer-to-Peer Systems (IPTPS '03)</i> , Feb. 2003.				
	A 6	M. Castro, P. Druschel, A.-M. Kermarrec, and A. Rowstron, "SCRIBE: A large-scale and decentralized application-level multicast infrastructure," <i>IEEE Journal on Selected Areas in Communications (JSAC) (Special issue on Network Support for Multicast Communications)</i> , 20(8), Oct. 2002.				
	A 7	M. Castro, M. B. Jones, A.-M. Kermarrec, A. Rowstron, M. Theimer, H. Wang, and A. Wolman, "An Evaluation of Scalable Application-Level Multicast Built Using Peer-To-Peer Overlays" <i>Proceedings of Infocom 2003</i> , Apr. 2003.				
	A 8	Y.-H. Chu, S. G. Rao, and H. Zhang, "A case for end system multicast," <i>ACM SIGMETRICS 2000</i> , pages 1-12, June 2000.				

Examiner Signature		Date Considered	
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\* A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).

+ An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).

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OTHER - NON PATENT LITERATURE DOCUMENTS					
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			Yes	No**	
	A 9	F. Dabek, M. F. Kaashoek, D. Karger, R. Morris, and I. Stoica, "Wide area cooperative storage with CFS," <i>18<sup>th</sup> Symposium on Operating Systems Principles</i> , Oct. 2001.			
	A 10	S. Deering and D. Cheriton, "Multicast Routing in Datagram Internetworks and Extended LANs" <i>ACM Transactions on Computer Systems</i> , 8(2), May 1990.			
	A 11	S. Deering, D. Estrin, D. Farinacci, V. Jacobson, C. Liu, and L. Wei, "The PIM Architecture for Wide-Area Multicast Routing," <i>IEEE/ACM Transactions on Networking</i> , 4(2), Apr. 1996.			
	A 12	J. R. Douceur, "The Sybil Attack," <i>First International Workshop on Peer-to-Peer Systems (IPTPS '02)</i> , Mar. 2002.			
	A 13	R. French and J. Kohl, "The Zephyr Programmer's Manual," Apr. 1989. <i>MIT Project Athena</i> .			
	A 14	R. E. Gruber, B. Krishnamurthy, and E. Panagos, "The Architecture of the READY Event Notification Service," <i>ICDCS Middleware Workshop</i> , June 1999.			
	A 15	N. J. A. Harvey, M. B. Jones, S. Saroiu, M. Theimer, and A. Wolman, "SkipNet: A Scalable Overlay Network with Practical Locality Properties," <i>Proceedings of Fourth USENIX Symposium on Internet Technologies and Systems (USITS '03)</i> , Mar. 2003.			
	A 16	N. J. A. Harvey, M. B. Jones, M. Theimer, and A. Wolman, "Efficient Recovery From Organizational Disconnects in SkipNet," <i>Proceedings of Second International Workshop on Peer-to-Peer Systems (IPTPS '03)</i> , Feb. 2003.			
	A 17	J. Jannotti, D. K. Gifford, K. L. Johnson, M. F. Kaashoek, and J. W. O'Toole, "Overcast: Reliable Multicasting with an Overlay Network," <i>Proceedings of the Fourth Symposium on Operating System Design and Implementation (OSDI)</i> , pages 197-212, October 2000.			
	A 18	B. Kantor and P. Lapsley, "Network News Transfer Protocol (NNTP)," <i>Network Working Group Request for Comments 977 (RFC 977)</i> , Feb. 1986. <a href="http://www.ietf.org/rfc/rfc0977.txt">http://www.ietf.org/rfc/rfc0977.txt</a> .			

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OTHER - NON PATENT LITERATURE DOCUMENTS				
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			Yes	No* +
	A 19	P. Keleher, S. Bhattacharjee, and B. Silaghi, "Are Virtualized Overlay Networks Too Much of a Good Thing?" <i>First International Workshop on Peer-to-Peer Systems (IPTPS '02)</i> , Mar. 2002.		
	A 20	D. Malkhi, M. Naor, and D. Ratajczak, "Viceroy: A Scalable and Dynamic Emulation of the Butterfly," <i>Proceedings of the 21<sup>st</sup> Annual PODC</i> , July 2002.		
	A 21	P. Maymounkov and D. Mazieres, "Kademlia: A Peer-to-peer Information System Based on the XOR Metric," <i>First International Workshop on Peer-to-Peer Systems</i> , Mar. 2002.		
	A 22	B. Oki, M. Pfluegl, A. Siegel, and D. Skeen, "The Information Bus – An Architecture for Extensible Distributed Systems," <i>Proceedings of the 13<sup>th</sup> ACM Symposium on Operating Systems Principles</i> , pages 58–68, Dec. 1993.		
	A 23	V. N. Padmanabhan and K. Sripanidkulchai, "The Case for Cooperative Networking," <i>First International Workshop on Peer-to-Peer Systems</i> , Mar. 2002.		
	A 24	S. Ratnasamy, P. Francis, M. Handley, R. Karp, and S. Shenker, "A Scalable Content-Addressable Network," <i>Proceedings of ACM SIGCOMM</i> , Aug. 2001.		
	A 25	S. Ratnasamy, M. Handley, R. Karp, and S. Shenker, "Application-level Multicast using Content-Addressable Networks," <i>Proceedings of the Third International Workshop on Networked Group Communication</i> , Nov. 2001.		
	A 26	A. Rowstron and P. Druschel, "Pastry: Scalable, decentralized object location and routing for large-scale peer-to-peer systems," <i>Int'l Conference on Distributed Systems Platforms (Middleware)</i> , pp. 329–350, Heidelberg, Germany, Nov. 2001.		
	A 27	A. Rowstron and P. Druschel, "Storage management and caching in PAST, a large-scale, persistent peer-to-peer storage utility," <i>18<sup>th</sup> Symposium on Operating Systems Principles</i> , Oct. 2001.		
	A 28	A. Rowstron, A.-M. Kermarrec, M. Castro, and P. Druschel, "Scribe: The design of a large-scale event notification infrastructure," <i>Third International Workshop on Networked Group Communications</i> , Nov. 2001.		
	A 29	S. Saroiu, P. K. Gummadi, and S. D. Gribble, "A Measurement Study of Peer-to-Peer File Sharing Systems," <i>Proceedings of Multimedia Computing and Networking</i> , San Jose, CA, Jan. 2002.		

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			Yes	No**
	A 3 0	I. Stoica, R. Morris, D. Karger, M. F. Kaashoek, and H. Balakrishnan, "Chord: A Scalable Peer-To-Peer Lookup Service for Internet Applications," <i>Proceedings of ACM SIGCOMM, Aug. 2001</i> .		
	A 3 1	R. Strom, G. Banavar, T. Chandra, M. Kaplan, K. Miller, B. Mukherjee, D. Sturman, , and M. Ward, "Gryphon: An Information Flow Based Approach to Message Brokering," <i>Proceedings of International Symposium on Software Reliability Engineering '98, 1998</i> .		
	A 3 2	Talarian Inc., "Talarian: Everything You Need To Know About Middleware, 2000," <a href="http://www.talarian.com/industry/middleware/whitepaper.pdf">http://www.talarian.com/industry/middleware/whitepaper.pdf</a> .		
	A 3 3	H. Tangmunarunkit, R. Govindan, S. Shenker, and D. Estrin, "The Impact of Routing Policy on Internet Paths," <i>Proceedings of IEEE INFOCOM 2001, Apr. 2001</i> .		
	A 3 4	M. Theimer and M. B. Jones, "Overlook: Scalable Name Service on an Overlay Network," <i>Proceedings of the 22<sup>nd</sup> ICDCS, July 2002</i> .		
	A 3 5	TIBCO Inc., "Rendezvous Information Bus," 2001. <a href="http://www.rv.tibco.com/datasheet.html">http://www.rv.tibco.com/datasheet.html</a> .		
	A 3 6	A. Vahdat, J. Chase, R. Braynard, D. Kostic, and A. Rodriguez, "Self-Organizing Subsets: From Each According to His Abilities, To Each According to His Needs," <i>First International Workshop on Peer-to-Peer Systems (IPTPS '02), Mar. 2002</i> .		
	A 3 7	R. van Renesse, K. Birman, and W. Vogels, "Astrolabe: A Robust and Scalable Technology for Distributed System Monitoring, Management, and Data Mining," <i>ACM Transactions on Computer Systems (TOCS), 21(2), May 2003</i> .		
	A 3 8	D. Wong, N. Paciorek, T. Walsh, J. DiCelie, M. Young, and B. Peet, "Concordia: An Infrastructure for Collaborating Mobile Agents," <i>Proceedings of the First International Workshop on Mobile Agents, Apr. 1997</i> .		
	A 3 9	B. Y. Zhao, J. D. Kubiatowicz, and A. D. Joseph. "Tapestry: An Infrastructure for Fault-Resilient Wide-area Location and Routing," <i>Technical Report UCB//CSD-01-1141, UC Berkeley, Apr. 2001</i> .		

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Sheet	5	of	5
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